



U.S. Fish & Wildlife Service

# National Fish Passage Program

## *FISH PASSAGE DECISION SUPPORT SYSTEM*

<https://ecos.fws.gov/fpdss>

### Background

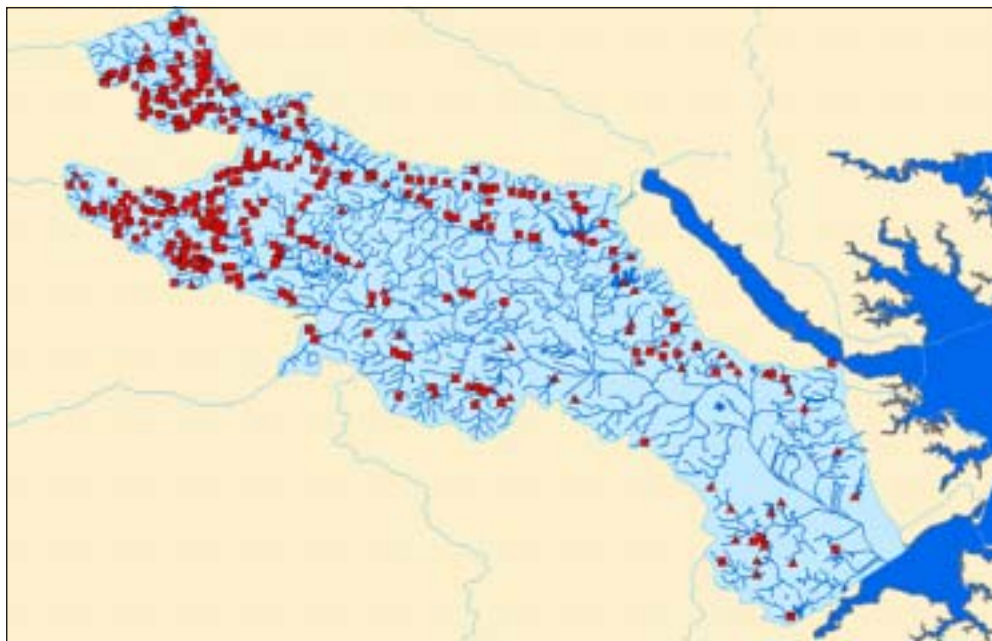
Initiated in 1999, the National Fish Passage Program works with partners to restore fish and other aquatic species by reconnecting habitat that has been fragmented by artificial barriers. The challenge is great. There are an estimated 75,000 dams greater than six feet in height and another 2.5 million smaller fish passage barriers in the United States.

Until recently, fishery biologists did not have access to a comprehensive inventory of all fish passage barriers to use for planning and prioritizing restoration efforts. In fact, two recent dam removal publications recommend establishing a comprehensive inventory of dams to allow better analysis and understanding of the segmented nature of streams and rivers.

Now, the National Fish Passage Program has given biologists and decision-makers a powerful new tool to address this issue better and faster — the Fish Passage Decision Support System.

### What is the Fish Passage Decision Support System?

The Fish Passage Decision Support System (FPDSS) is a comprehensive database of barriers preventing fish movement that is complemented by a host of analytical tools. The database provides barrier information, such as; location, type, size, owner, passage capabilities, associated fish species, and local habitat information. The FPDSS includes all barriers that prevent or inhibit fish or other aquatic species from reaching historic habitats, including dams, culverts, inefficient fishways, water diversions, ineffective screens, and inadequate flows or water quality.



*Watershed-level representation of barrier locations.*

Most importantly, the FPDSS is an internet-based, geographically-referenced system. It provides on-line data entry, and a mapping utility program with analytical Geographic Information System (GIS) capabilities.

### What does the Fish Passage Decision Support System do?

The FPDSS is a management tool, that with GIS software, increases the capabilities of fisheries scientists to prioritize fish passage projects, identify critical areas, and make better management decisions for implementing projects.

The many tools embedded in the FPDSS allows users to access data quickly using just a few simple hot buttons. Point-and-click operation is used wherever possible.



*Old mill dam blocking fish passage. USFWS photo.*

With just a few clicks of the mouse, the FPDSS allows users to quickly model the stream mileage made available by providing fish passage at a barrier.

The FPDSS is also designed to be a living database. Barriers are constantly being modified, removed, and newly identified. By contacting one of the FPDSS Coordinators, users will have the ability to update the information in the database.

The FPDSS will also assist natural resource agencies and groups with education and outreach information regarding the problem and solutions for fish passage in the U.S.

## The Future of the Fish Passage Decision Support System

The National Fish Passage Program is cooperating with partners and other Fish and Wildlife Service programs to enhance the FPDSS and to incorporate other sources of information. The FPDSS currently includes such databases as the Army Corps of Engineers' National Inventory of Dams, state dam databases from North Carolina and Tennessee, and barriers from the Pacific States Marine Fishery Commission's StreamNet database. USFWS biologists are entering data from recent inventory projects, and data on dams, culverts, dikes, and irrigation diversions from numerous cooperating agencies and organizations are also being added on a continuous basis.

Additional partnerships are needed to expand the data layers within the FPDSS. The National Fish Passage Program is looking for access to databases that have barrier, fish, and habitat information. If you would like to cooperate with this important effort, please contact the National Fish Passage Coordinator.

## For more information, contact:

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<b>Details:</b>	Barrier ID, Name, Height, Width, Length, Sequence, Year Operational, Type, Purpose, and Original Data Source; Owner Name and Type; Local Stream Name; Notes
<b>Passages:</b>	Upstream or Downstream Passage Present; Year Passage Operational; Passage Type; Status
<b>Species:</b>	Historic and Current Fish Species Upstream and Downstream; Historic and Current Fish Species Able to Pass Upstream and Downstream
<b>Admin:</b>	Partners, Operator, and Regulator Names and Types; Notes
<b>Hydro:</b>	River Miles to the Terminating End of Stream; Unblocked River Miles Upstream; Acres Upstream; Normal Storage Area of Reservoir; Surface Area of Impoundment; Discharge of Spillway; Drainage Area; Stream Width
<b>Location:</b>	Latitude; Longitude; USGS Hydrologic Unit Code; FWS Region; Counties; State; National Hydrologic Dataset Stream Reach

*The FPDSS allows users to create new barrier records and edit existing data (shown above in yellow text box) through these six data entry pages (below).*

*The mapper allows users to obtain information about barriers according to state, watershed or point location, and to perform barrier removal modeling processes.*